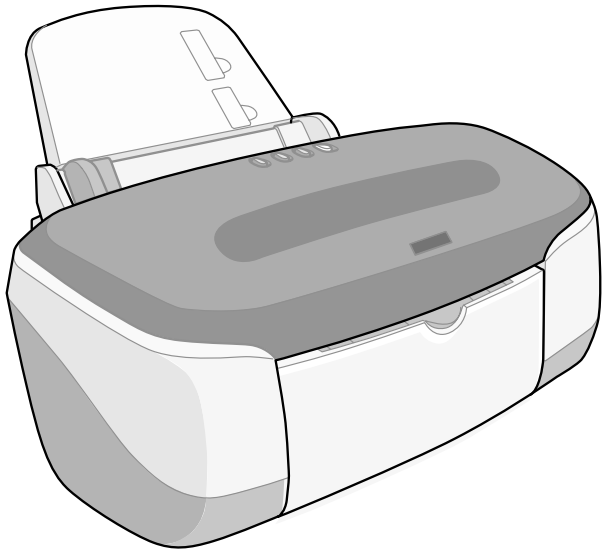
# SERVICE MANUAL



Color Inkjet Printer

## EPSON Stylus PHOTO 950

EPSON®

SEIJ01-015

# CONTENTS

## Chapter 1 PRODUCT DESCRIPTION


**1.1 Overview ..... 9**

**1.2 Specification ..... 11**

1.2.1 Printing specification ..... 11
1.2.2 Character specification ..... 12
1.2.3 Control code ..... 12
1.2.4 Paper feeding ..... 12
1.2.5 Paper specification ..... 13
1.2.6 Printing area ..... 14
1.2.7 Adjust Lever ..... 15
1.2.8 Ink ..... 15
1.2.9 Input data buffer ..... 16
1.2.10 Electrical specification ..... 16
1.2.11 Acoustic noise ..... 17
1.2.12 CE Marking ..... 17
1.2.13 Safety Approvals ..... 17
1.2.14 Reliability ..... 17
1.2.15 Environmental condition ..... 17

**1.3 Printer Function ..... 19**

1.3.1 Operator controls ..... 19
1.3.2 Operate switch ..... 19
1.3.3 Indicators ..... 19
1.3.4 Panel Functions ..... 19
1.3.5 Special settings mode (*1) ..... 20
1.3.6 Printer condition and Panel status ..... 21
1.3.7 Printer Initialization ..... 22
1.3.8 Default Values ..... 23
1.3.9 Errors ..... 23

**1.4 Physical specification ..... 24**


## Chapter 2 OPERATING PRINCIPLES


**2.1 Overview ..... 26**

**2.2 Printer Mechanism ..... 26**

2.2.1 Printhead ..... 27
2.2.2 Carriage Mechanism ..... 28
2.2.3 Paper Feeding Mechanism ..... 30
2.2.4 Paper Loading Mechanism (ASF Unit) ..... 34

**2.3 Electrical Circuit Operating Principles ..... 43**

2.3.1 Power Supply Circuit Operating Principles ..... 43
2.3.2 C456 Main Board ..... 46


## Chapter 3 TROUBLESHOOTING


**3.1 Overview ..... 54**

3.1.1 Communication Error ..... 55
3.1.2 Too Late Throughput ..... 55
3.1.3 Status Monitor does not operate ..... 56
3.1.4 Troubleshooting with LED Error Indications ..... 57
3.1.5 Isolating the Faulty Part on the Power Supply Board ..... 77
3.1.6 Isolating the Faulty Part according to the Phenomenon ..... 79


## Chapter 4 DISASSEMBLY AND ASSEMBLY


**4.1 Overview ..... 92**

4.1.1 Precautions ..... 92
4.1.2 Tools ..... 93
4.1.3 Screws ..... 94
4.1.4 Work Completion Check ..... 95

**4.2 Disassembly ..... 96**

4.2.1 Housing Removal ..... 97
4.2.2 Board Assembly Removal ..... 101
4.2.3 ASF Unit Removal ..... 105

4.2.4 Ink System Unit Removal ..... 107
4.2.5 Printhead Removal ..... 108
4.2.6 Carriage Unit / CR Guide Shaft Removal ..... 110
4.2.7 Star Wheel Roller Unit Removal ..... 116
4.2.8 Front Paper Guide Removal ..... 117
4.2.9 EJ Roller Unit Removal ..... 118
4.2.10 Lower Paper Guide Unit Removal ..... 119
4.2.11 Motor Removal ..... 120
4.2.12 Sensor Removal ..... 122
4.2.13 PF Roller Unit Removal ..... 124
4.2.14 ASF Unit Disassembly ..... 125
4.2.15 ASF Assembly Points ..... 130

## Chapter 5 ADJUSTMENT

**5.1 Overview ..... 133**
5.1.1 Conditions for Each Adjustment ..... 133
**5.2 Adjustment ..... 135**
5.2.1 Setup the Adjustment Program ..... 135
5.2.2 Head ID Input ..... 136
5.2.3 CR motor drive dispersion measurement sequence ..... 138
5.2.4 Ink Charge ..... 139
5.2.5 Head Angular Adjustment. ..... 140
5.2.6 Bi-D Adjustment ..... 144
5.2.7 USB ID Readout (Checking) ..... 147
5.2.8 EEPROM Initialization ..... 149
5.2.9 Platen Gap Adjustment (Mechanism Adjustment) ..... 151
5.2.10 Head Cleaning Operation ..... 154
5.2.11 Protection Counter Clear (and Check) ..... 155
5.2.12 First Dot Position Adjustment ..... 157

## Chapter 6 MAINTENANCE

**6.1 Overview ..... 159**
6.1.1 ROM Replacement ..... 159
6.1.2 Cleaning ..... 159
6.1.3 Service Maintenance ..... 160
6.1.4 Lubrication and Adhesion ..... 161
6.1.5 Lubrication the Carriage Guide Shaft ..... 162
6.1.6 Lubrication ..... 165

## Chapter 7 APPENDIX

**7.1 Connector Summary ..... 175**
7.1.1 Connectors and Pin Layouts ..... 175
7.1.2 EEPROM Address Map ..... 179
7.1.3 CSIC address map (All color) ..... 186
**7.2 Electrical Circuits ..... 187**